



COPY OF PAPERS
ORIGINALLY FILED

(Translation)

RECEIVED
JUN 12 2002
TC 2800 MAIL ROOM

NOTICE OF REASONS FOR REJECTION

5 Patent Application No. 2001-342692

Drafting Date: February 19, 2002

Mailing Date: February 22, 2002

10 Examiner: Norimitsu TANAKA (9730 4E00)

To: Seiji OKUDA, Patent Attorney

Applied Sections of Japanese Patent Law: Sec. 29(2) and 37

15

The present application is rejected for the following reasons. Any argument must be submitted within 60 days from the mailing date of this document.

20

REASONS

(1) The inventions defined by the following claims of the present application are rejected under Sec. 29(2) of the Japanese Patent Law as being obvious to those skilled in the art in view of the subject matter described in the following

25

RECEIVED
JUN 25 2002
TECHNOLOGY CENTER 1700

cited references published in Japan or in a foreign country prior to the filing of the present application.

(2) The present application fails to comply with the requirements of Sec. 37 of the Japanese Patent Law on the following points.

REMARKS

(as for the references, see the list of cited references)

10

Regarding Reason (1):

- Claims 1, 13, 14, 15, 30 and 31
- References Nos. 1 and 2
- Note

15 The subject matter described in Reference No. 1 is different from the claimed inventions in that Reference No. 1 provides no detailed description about providing the guide means in preparing a material alloy for an iron-based rare earth magnet. However, Reference No. 2 does describe on
20 column 1, line 36 to column 2, line 7 that the crystalline structure of a resultant rapidly solidified alloy may be well controlled by using a tundish (equivalent to the "guide means" described in the claims), which can feed a molten alloy onto the surface of a roller at a substantially
25 tially constant flow rate per unit width, instead of per-

forming the normal strip casting process in which the molten alloy is dripped directly through a nozzle onto the rotating chill roller. The Examiner believes that to facilitate the control of the crystalline structure should have been one of the objects to be achieved to make a material alloy for an iron-based rare earth magnet uniformly through a casting process as described in Reference No. 1. Thus, it would have been obvious to those skilled in the art to apply the modified strip casting technique as described in Reference No. 2 to the method of making a material alloy for an iron-based rare earth magnet by a melt spinning process as described in Reference No. 1.

● Claim 2

15 ● References Nos. 1 and 2

● Note

The channel of the tundish as described in Reference No. 2 naturally has its size or position adjusted in accordance with the width of the alloy ingot to be obtained.

20

● Claim 3

● References Nos. 1, 2 and 3

● Note

Reference No. 3 describes that a reduced-pressure atmosphere should be created in making a rare earth alloy.

25

- Claim 22

- References Nos. 1 and 2

- Note

5 The flow width of a molten alloy may be determined appropriately in accordance with the shape of a cast alloy to be obtained.

- Claim 25

- References Nos. 1, 2 and 3

10

- Note

Reference No. 3 describes on column 8, lines 49-50 that a rare earth rapidly solidified alloy to be prepared by a strip casting process has a thickness falling within the range defined by this claim.

15

- Claims 27, 28 and 29

- References Nos. 1, 2 and 4

- Note

20 Reference No. 4 describes on page 3, upper left column, lines 8-14 that a roller for use in a strip casting process is made of copper and that the surface of the roller is covered with a hard coating (e.g., plated with chromium).

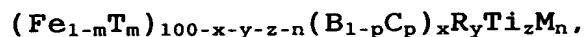
Regarding Reason (2)

25 The inventions defined by claims 1 to 31 of the present

applications do not satisfy any of the relationships of Sec. 37(3) of the Japanese Patent Law with the invention defined by claim 32 of the present application, which relates to a product (which invention will be herein referred to as a "specified invention"), for the following reasons:

The inventions defined by claims 1 to 31 of the present application relate to a method of making a material alloy for an iron-based rare earth magnet from

10 "a melt of an iron-based rare earth material alloy having a composition represented by the general formula:



where T is at least one element selected from the group consisting of Co and Ni; R is at least one element selected from the group consisting of Y (yttrium) and the rare earth elements; and M is at least one element selected from the group consisting of Al, Si, V, Cr, Mn, Cu, Zn, Ga, Zr, Nb, Mo, Ag, Hf, Ta, W, Pt, Au and Pb, the mole fractions x, y, z, m, n and p satisfying the inequalities of:

$$10 \text{ at}\% < x \leq 25 \text{ at}\%;$$

$$7 \text{ at}\% \leq y < 10 \text{ at}\%;$$

$$0.5 \text{ at}\% \leq z \leq 12 \text{ at}\%;$$

$$0 \leq m \leq 0.5;$$

25 $0 \text{ at}\% \leq n \leq 10 \text{ at}\%;$ and

$0 \leq p \leq 0.25$, respectively".

However, the alloy compositions defined by claim 32 of the present application include a composition that does not fall within the composition range defined by claims 1 to 31 of the present application. Accordingly, the inventions defined by claims 1 to 31 of the present applications cannot be regarded as "inventions relating to a process of manufacturing a product according to the specified invention".

10 The present application fails to comply with the requirements of Sec. 37 of the Japanese Patent Law, and the Examiner has not examined yet whether or not the inventions defined by claims other than claims 1 to 31 of the present application comply with the requirements of the other sections of the Japanese Patent Law.

No reasons for rejection have been found yet as to the inventions defined by the claims other than those rejected in this notice of reasons for rejection. When a new reason for rejection is found, another notice of reasons for rejection will be sent.

LIST OF CITED REFERENCES

1. Pamphlet of PCT International Application Publication No. 00/03403

2. Japanese Laid-Open Publication No. 9-155513
3. Japanese Laid-Open Publication No. 2000-79449
4. Japanese Laid-Open Publication No. 61-140350

5

Record of search for prior art documents

*Classes searched: IPC, 7th edition

B22D11/06, C21D6/00, C22C38/00

10

*Prior art documents discovered during the search but not relied upon:

Japanese Laid-Open Publication No. 59-46008

15

The documents cited in the above record of a search for prior art documents do not form the basis of the reasons for rejection.

拒絶理由通知書

特許出願の番号	特願2001-342692
起案日	平成14年 2月19日
特許庁審査官	田中 則充 9730 4E00
特許出願人代理人	奥田 誠司 様
適用条文	第29条第2項、第37条

この出願は、次の理由によって拒絶をすべきものである。これについて意見があれば、この通知書の発送の日から60日以内に意見書を提出して下さい。

理 由

(1) この出願の下記の請求項に係る発明は、その出願前日本国内又は外国において頒布された下記の刊行物に記載された発明に基いて、その出願前にその発明の属する技術の分野における通常の知識を有する者が容易に発明をすることができたものであるから、特許法第29条第2項の規定により特許を受けることができない。

(2) この出願は、下記の点で特許法第37条に規定する要件を満たしていない。

記 (引用文献等については引用文献等一覧参照)

上記理由(1)について

- ・請求項 1, 13~15, 30, 31
- ・引用文献等 1, 2
- ・備考

引用文献1に記載された発明は、鉄基希土類磁石原料合金の製造に際して案内手段を設けることについて具体的な記載がない点で当該請求項に係る発明と相違するものの、引用文献2には、得られる合金の結晶組織を良好に制御するべく、ノズル部分から直接回転ロールに合金熔融物を落下させる一般的なストリップキャストに代えて、ロール幅内に略均一流量で溶湯を供給し得るタンディッシュ(当該請求項に記載された案内手段に相当)を設けることが記載されており(第1欄第36行~第2欄第7行)、引用文献1に記載された鉄基希土類磁石原料合金の製造に際しても、結晶組織の制御を容易にすることは、鑄造工程を通して均一な組織の鉄基希土類磁石原料合金を製造するために当然に求められる課題であるから、引用文献1に記載されたメルトスピニングによる鉄基希土類磁石原料合金

の製造方法として引用文献2に記載されたストリップキャスト法を採用することは当業者が容易になし得るものである。

- ・請求項 2
- ・引用文献等 1, 2
- ・備考

引用文献2に記載されたタンディッシュ内の流通通路は、製造する合金鋳塊の幅に応じて、その大きさや設置位置を調整すべきものである。

- ・請求項 3
- ・引用文献等 1～3
- ・備考

希土類元素合金を鋳造する際に減圧雰囲気とすることは引用文献3に記載されている。

- ・請求項 22
- ・引用文献等 1, 2
- ・備考

合金溶湯の流れの幅は、製造される鋳塊に求める形状に応じて適宜設定し得るものである。

- ・請求項 25
- ・引用文献等 1～3
- ・備考

希土類元素含有合金をストリップキャストにより製造する際に、鋳片の厚みを当該請求項に記載された範囲とすることは、引用文献3に記載されている（第8欄第49行～第50行）

- ・請求項 27～29
- ・引用文献等 1, 2, 4
- ・備考

引用文献4にはストリップキャストに使用するロールの材料として銅を使用すること、及び該ロールの表面に硬質クロムメッキ等の硬質被膜処理を施すことが記載されている（第3頁左上欄第8行～第14行）。

上記理由（2）について

請求項1～31に記載される発明は、次に示す理由から、物の発明である請求項32に記載される発明（以下、「特定発明」という）に対し、特許法第37条第3号に掲げる関係を満たさない。

・調査した分野 I P C第7版 B 2 2 D 1 1 / 0 6 , C 2 1 D 6 / 0 0 ,
C 2 2 C 3 8 / 0 0

発送番号 054569

発送日 平成14年 2月22日 4 / 4

・ 先行技術文献 特開昭59-46008号公報

この先行技術文献調査結果の記録は、拒絶理由を構成するものではない。

この拒絶理由通知書の内容に関する問い合わせ先

特許審査第3部金属加工 審査官 田中 則充

電話 03-3581-1101 内線 3425